



National Aeronautics and Space Administration  
Goddard Space Flight Center

Wallops Flight Facility, Wallops Island, Virginia

# Inside Wallops

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## ***USGS Scientists, in Partnership with NASA Wallops, Develop New Extreme-Storm Hazards Map***

U.S. Geological Survey scientists, with their partners in NASA, using data gathered by a high-tech, airplane mounted NASA Wallops Flight Facility laser, have developed a new map showing critical elevations of the south Atlantic coast.



*Home following a Northeaster.*

The map indicates relative vulnerabilities of the coast to storm surge overtopping and inundation by hurricanes and extreme storms. They have also developed a new scale that categorizes expected coastal change (erosion and accretion) that occurs during storms.

The map and scale are available on the web at: <http://coastal.er.usgs.gov/hurricanes/mappingchange/>.

The map color-codes segments of shoreline most vulnerable to overtopping by wave run-up for a storm of the same intensity hitting the coast at approximately mean tide level.

The dark red areas are more likely to be overtopped. The magnitude of coastal change that occurs during a storm is related to how high on the beach wave run-up reaches relative to the elevation of the beach and dunes.

The data were acquired with NASA's Airborne Topographic Mapper, (ATM), and have far better accuracy and data density than data presently available from traditional topographic maps. The ATM measures topography to an accuracy of ten to twenty centimeters by combining measurements from an airborne laser altimeter and GPS (global positioning system) receivers.

"Our ultimate goal is to provide sound, scientific information on where hazardous areas occur along the coast so that better decisions can be made on how far back new structures should be set from eroding shorelines," said USGS Coastal Geologist Abby Sallenger, one of the map's creators.

"Accurate measurements of coastal topography are important to

understanding coastal vulnerability to storms. This map is a first step. The map would have been nearly impossible to put together using data from traditional means of beach surveying."

As the aircraft flies along the coast, a laser altimeter scans a several hundred meter swath of the earth's surface acquiring an estimate of ground elevation every few square meters. USGS and NASA scientists measure change by comparing pre-storm to post-storm data.



*USGS Photos*

*North Carolina beach house following Hurricane Dennis.*

Traditional USGS topographic maps do not have sufficient resolution to be useful for comparing coastal elevations. Airborne scanning laser surveys are providing unprecedented data to investigate the magnitude and causes of coastal changes that occur during severe storms.

In the future, similar maps will be made for the Gulf of Mexico and Northeast US coastlines, said Sallenger.

For more information on NASA's Airborne Topographic Mapper visit: <http://aol.wff.nasa.gov/aoltm.html>

### ***Be a Mentor***

This summer nine high school students will be spending six to eight weeks at Wallops through the National Space Club Scholars Program and the NASA Summer High School Apprenticeship Research Program (SHARP).

There are four students in the eight-week SHARP program, which begins June 18. The Space Club Scholars Program has five participants and runs for six weeks beginning June 25.

The students are at the top of their class and have an interest in pursuing degrees in engineering, science or computer science. Most have computer skills and some have experience programing in C, C++ or Autocad. If you would like to mentor a student this summer, contact Keith Koehler by email, [Keith.A.Koehler.1@gsfc.nasa.gov](mailto:Keith.A.Koehler.1@gsfc.nasa.gov) or by calling x1579.

## ***Wallops Shorts.....***

### ***Xaposoarus Flight***

The third flight of the Xaposoarus was successfully conducted May 3 from Wallops Island. The Xaposoarus was launched from a blimp at an altitude of approximately 1,083 feet. Piloted by Ted Miles, Electrical Systems Branch, a total flight time of 15 minutes 47 seconds was achieved. Good data was obtained including temperature, humidity, total pressure, static pressure, motor voltage and video with angle-of-attack and side-slip vanes. Based on preliminary results, it appears that a profile of a temperature inversion was obtained and that the vehicle was again launched above the boundary layer. All systems performed as planned.

### ***Bruce Scott Retires***

Congratulations to Bruce Scott, Range and Mission Management Office, who retired effective May 3 with 30 years of government service.

## ***Identity Theft and Clearing your Computer Hard Drive***

The NASA Office of Inspector General (OIG) has posted an information alert regarding identity theft. Identity theft is one of the fastest growing crimes in America.

Identity theft, or fraud, involves taking the victim's identity to open credit card accounts, make purchases, obtain loans or order false checks and ATM cards in another person's name. All that an "identity thief" needs is your birth date, social security number, and any other identifying information, such as an address and/or phone number.

The NASA OIG issued an alert about identity theft and how to guard against it. This alert is available on the OIG web site: <http://www.hq.nasa.gov/office/oig/hq/identity.html>

There also is a brochure available on clearing information from your computer hard drive. This brochure discusses the availability of data (including very personal and sensitive information) remaining on hard drives even though the user believes the data has been deleted. In many cases, this information can easily be retrieved.

The brochure discusses methods one can take to permanently remove data from a computer hard drive. To access the brochure, go to: <http://www.hq.nasa.gov/office/oig/hq/harddrive.pdf>.

# Plenty of May Flowers

by Bob Steiner, Meteorologist

Averaging 54 degrees, temperatures during April were one degree warmer than average. There were 16 days with warmer than normal temperatures and 14 nights with temperatures below normal. On the warmest day, April 9, a new record high for that date was set when the mercury climbed to 85 degrees.

The record low of 37 degrees set on April 27, 1972 was matched this year as well. The temperature fell below freezing once the month, on the morning of April 5. This also was the coldest temperature of the month.

Rainfall totals were not quite up to the average for April even though there were 11 days with measurable precipitation of 2.4 inches. This falls short of the average by .27 inches. The most rainfall occurring during a 24-hour period was .99 inches on April 10 and 11.



Spring is here and the May flowers are in full bloom. June is fast approaching bringing school break, summer vacations and projects.

We can expect a little over three inches of rainfall usually occurring during eight days with measurable precipitation.

Average daily high temperatures at the beginning of the month are in the upper 70s, increasing into the mid-80s by the end of the month. Normal overnight lows are around 60 degrees early in the month climbing to the upper 70s going into July.

The record high of 96 degrees has occurred on four different days in June, three times in 1991 and once in 1999. The record low occurred on June 1 and 2, 1976.

The hurricane season officially begins in June. On the average 6 hurricanes develop in the Atlantic. The first six names designated for 2001 are: Allison, Barry, Chantal, Dean, Erin and Felix.



Now is the time to prepare for a visit by any of these storms. Store canned food, bottled water, batteries and flashlights, extra clothing and first aid kits. Evacuation routes planned now will save valuable time if/when an emergency arises.

Let us all enjoy Nature's many bounties on the Eastern Shore, but don't get caught short when the time comes.

## Mark your calendar .....

The Tailgate Sale will be held in the Flag Court Parking Lot on Thursday, May 10, beginning at 11:30 a.m. If it rains, the sale will be held in the new Picnic Pavilion between Building F-10 and the softball fields.

The fabulous steak dinner will be held Friday, May 11, in Building F-3. Eat anytime between 6:30 and 8:30 p.m. Tickets are \$15 per person. Call Terry Ewell, x1133, for further info.

The Eastern Shore Blood Drive is May 17 in Building F-3. Call Linda Layton, x1561 to schedule an appointment.

## NASA Visitor Center Events Scheduled for May

### May 19 — "Kite Flight"

Beginning at 11 a.m., children will have an opportunity to explore the history of flight, construct their own kites and fly them. The activity takes approximately 40 minutes.

On Saturdays and Sundays, the 10-minute puppet show, "Puppets in Space", is presented at 11 a.m. Puppet astronauts and Sam the monkey explore space flight and the space suit. An eight-minute version of the film "Astrosmiles" follows the puppet show.

On Sundays at 1 p.m. a 30-minute program on "Humans in Space" is presented. The program looks at living and working in space and includes a review of the astronauts' meals and their wardrobes. The program is followed by an activity during which children have the opportunity to create their own "space helmet."

The Visitor Center is open daily from 10 a.m. to 4 p.m., Thursday through Monday and is closed on Tuesday and Wednesday. Admission to Visitor Center Programs is free. For further information, please call x2298.

## For Rent

Pocomoke, Md., House for rent, 4 bedroom, 2.5 bath, 2-car garage, no pets. Rent \$700.00. Available 7/1/01, Call Ralph Welsh, (301) 464-9596.

## Wanted

Would like to join an existing car pool or start new one in Salisbury area. Call Charlie Cathell, (757) 824-2461.

## Working Together OHR and YOU

The Office of Human Resources (OHR) will host two Working Together events during May. OHR representatives will be in Building E-104 on May 22 and 24, from 10 a.m. to 2 p.m., to provide information about HR services and resources available to employees.

Planned topics include family friendly leave, navigating the HR website, training and development opportunities, and a preview of the soon-to-be released Resume Management system. Further details will be in upcoming issues of *Inside Wallops*.



## From FEDweek May 2 Issue

### TSP Percentage Limit Reminder

The first step in raising the TSP investment limits kicks in with the start of the TSP's open season May 15.

Investors under the FERS system will be able to boost their biweekly withholdings to as much as 11 percent of salary. Those under the CSRS system will be able to invest up to 6 percent of salary. Highly-paid FERS employees shouldn't necessarily go up to the maximum even if they can afford it, however. If they hit the dollar cap before the end of the calendar year, agency matching contributions for them will cut off until next year.

The percentage limits will go up by another percentage point in the following TSP open season, beginning November 15, and will continue rising until they hit 15 percent under FERS and 10 percent under CSRS in 2005 and will be abolished effective in calendar year 2006.

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